

REMARKS

By this amendment, claims 1-28 have been cancelled, claims 29, 41, and 44 have been amended, and claims 56-58 have been added. Thus, claims 29-58 are now active in the application. Reexamination and reconsideration of the application are respectfully requested.

Initially, Applicants and their undersigned attorney wish to thank Examiner Boddie for the very helpful telephone interview granted on November 14, 2007. In the interview, the amendments presented above to claim 29 were discussed in detail as to how they distinguish claim 29 over the Eleyan reference (U.S. 6,144,370).

In particular, it was initially proposed to amend claim 29 to require the inclusion of the first, second and third supporting members (32A, 32B and 32C) arranged in contact with the sphere 31 at respectively spaced apart locations, that the magnetic flux of the magnetic flux circuit goes from the electromagnet 33 through the first supporting member 32A, the sphere 31, and the second supporting member 32B, and returns to the electromagnet 33, and that the electromagnet generates a magnetic attractive force to attract the sphere to the first and second supporting members. The Examiner raised a concern that perhaps such proposed language could still be broadly read on the Eleyan et al. reference by considering that electromagnetic flux generated from one of the pole pieces a-j (Fig. 13 of Eleyan) could include at least weak lines of magnetic flux that go through a support, such as support 36 of Eleyan. Accordingly, additional claim language requiring the particular arrangement of the magnetic flux circuit, as illustrated in Fig. 3, was discussed. In particular, the additional claim language “, with said sphere being located in said magnetic flux circuit between said first and second supporting members” was proposed to clearly distinguish claim 29 over the Eleyan et al. reference. The Examiner indicated he felt this additional language would likely render claim 29 patentable over Eleyan, but did not commit to such allowance as he felt that additional consideration was needed upon filing of a response including such amendment.

Thus, the above-discussed language is now included in each of independent claims 29, 41 and 44, and accordingly, it is submitted that claims 29, 41 and 44 are clearly allowable over the references of record for the reasons set forth above and as discussed in the interview.


Independent claim 55 was also discussed in the interview, and the Examiner agreed that the present language of claim 55 distinguishes over the combination of Eleyan et al. and Susumu. In this regard, the argument was presented that the claim requires that the sphere consists of one of Martensite Stainless Steel and Ferrite Stainless Steel, and that such “consisting of” language requires the sphere to be made only of either Martensite Stainless Steel or Ferrite Stainless Steel. It was noted that the Eleyan et al. reference does not disclose a particular material, and that the Susumu reference (JP 2000-226641) merely indicates that a “rolling element” can be “formed of Martensitic Stainless Steel.” It was pointed out that this is not a disclosure that a sphere is made only of such material. Furthermore, it was noted that, even if the Susumu reference could be considered to teach making a sphere of only Martensitic Stainless Steel, such would not render obvious the present invention of claim 55, because a person of ordinary skill in the art would not have found it obvious to modify Eleyan et al. to utilize a sphere made only of Martensitic Stainless Steel. That is, the Eleyan et al. reference relies upon the sphere 100, 200 thereof being formed with numerous permanent magnets therein such that energization of the magnetic pole pieces 106(a-j) sequentially will cause rotation of the sphere. If the Eleyan et al. sphere 100, 200 was modified in view of Susumu to be made only of Martensitic Stainless Steel, it could not have individual permanent magnets therein to enable rotation upon sequential activation of the magnetic pole pieces 106(a-j). The Examiner agreed with this reasoning, and indicated that claim 55 distinguishes over the combination of Eleyan and Susumu.

Thus, for the above reasons, it is submitted that all of the independent claims 29, 41, 44 and 55 is clearly distinguishable over the prior art references of record taken individually or in any combination thereof. Therefore, it is respectfully submitted that the present application is clearly allowable, and an early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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